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U. S. DEPT. OF AGRICULTURE  
NATIONAL RESOURCES LIBRARY

JUL 16 1964

**WATER SUPPLY OUTLOOK<sup>CURRENT SERIAL RECORDS</sup>**  
and  
**FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS**  
**for**  
**IDAHO**

UNITED STATES DEPARTMENT of AGRICULTURE...SOIL CONSERVATION SERVICE,  
and  
IDAHO STATE RECLAMATION ENGINEER

Data included in this report were obtained by the agency named above in cooperation with the Comptroller of Water Rights of British Columbia, and Federal, State and private organizations listed on the last page of this report.

AS OF JAN. 1, 1964

# UNITED STATES DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE

## To Recipients of Water Supply Outlook Reports:

The climate of the cultivated and populated areas of the West is characterized by relatively dry summer months. Such precipitation as occurs falls mostly in the winter and early spring months when it is of little immediate benefit to growing crops. Most of this precipitation falls as mountain snow which stays on the ground for months, melting later to sustain streamflow during the period of greatest demand during late spring and summer. Thus, nature provides in mountain snow an imposing water storage facility.

The amount of water stored in mountain snow varies from place to place as well as from year to year and accordingly, so does the runoff of the streams. The best seasonal management of variable western water supplies results from advance estimates of the streamflow.

A snow survey consists of a series of about ten samples taken with specially designed snow sampling equipment along a permanently marked line, up to 1000 feet in length, called a snow course. The use of snow sampling equipment provides snow depth and water equivalent values for each sampling point. The average of these values is reported as the snow survey measurement for a snow course.

Snow surveys are made monthly or semi-monthly beginning in January or February and continue through the snow season until April, May or June. Currently more than 1400 western snow courses are measured each year. These measurements furnish the key data for water supply forecasts.

Streamflow forecasts are obtained by a comparison of total or maximum snow accumulation, as measured by snow water equivalent, to the subsequent spring and summer or snowmelt season runoff over a period of years. The snow water equivalent measured in selected snow courses provides most of the index to the streamflow forecast for the following season. More accurate forecasts are usually obtained when other factors such as soil moisture, base flow and spring precipitation are considered and included in the forecast procedure. Early season forecasts assume average climatic conditions through the snowmelt season.

Listed below are the Federal-State-Private Cooperative Snow Survey and Water Supply Forecast reports available for the West which contain detailed information on snow survey measurements, streamflow forecasts, reservoir storage, soil moisture and other guide data to water management and conservation decisions. Soil Conservation Service Reports may be secured from Water Supply Forecasting Unit, Soil Conservation Service, P.O. Box 2807, Portland, Oregon 97208.

### PUBLISHED BY SOIL CONSERVATION SERVICE

<u>REPORTS</u>	<u>ISSUED</u>	<u>LOCATION</u>	<u>COOPERATING WITH</u>
<b>RIVER BASINS</b>			
WESTERN UNITED STATES			
WESTERN UNITED STATES	MONTHLY (FEB.-MAY)	PORTLAND, OREGON	ALL COOPERATORS
BASIC DATA SUMMARY			
BASIC DATA SUMMARY	OCTOBER 1	PORTLAND, OREGON	ALL COOPERATORS
<b>STATES</b>			
ALASKA	MONTHLY (MAR.-MAY)	PALMER, ALASKA	ALASKA S.C.D.
ARIZONA	SEMI-MONTHLY (JAN. 15 - APR. 1)	PHOENIX, ARIZONA	SALT R. VALLEY WATER USERS ASSOC. ARIZ. AGR. EXP. STATION
COLORADO AND NEW MEXICO	MONTHLY (FEB.-MAY)	FORT COLLINS, COLORADO	COLO. STATE UNIVERSITY COLO. STATE ENGINEER N. MEX. STATE ENGINEER
IDAHO	MONTHLY (JAN.-JUNE)	BOISE, IDAHO	IDAHO STATE RECLAMATION ENGINEER
MONTANA	MONTHLY (JAN.-JUNE)	BOZEMAN, MONTANA	MONT. AGR. EXP. STATION
NEVADA	MONTHLY (JAN.-MAY)	RENO, NEVADA	NEVADA DEPT. OF CONSERVATION AND NATURAL RESOURCES - DIVISION OF WATER RESOURCES
OREGON	MONTHLY (JAN.-JUNE)	PORTLAND, OREGON	OREG. STATE UNIVERSITY OREGON STATE ENGINEER
UTAH	MONTHLY (JAN.-JUNE)	SALT LAKE CITY, UTAH	UTAH STATE ENGINEER
WASHINGTON	MONTHLY (FEB.-JUNE)	SPOKANE, WASHINGTON	WN. STATE DEPT. OF CONSERVATION
WYOMING	MONTHLY (FEB.-JUNE)	CASPER, WYOMING	WYOMING STATE ENGINEER

### PUBLISHED BY OTHER AGENCIES

<u>REPORTS</u>	<u>ISSUED</u>	<u>AGENCY</u>
BRITISH COLUMBIA	MONTHLY (FEB.-JUNE)	WATER RESOURCES SERVICE, DEPT. OF LANDS, FOREST AND WATER RESOURCES, PARLIAMENT BLDG., VICTORIA, B.C., CANADA
CALIFORNIA	MONTHLY (FEB.-MAY)	CALIF. DEPT. OF WATER RESOURCES, P.O. BOX 388, SACRAMENTO, CALIF.

**WATER SUPPLY OUTLOOK**  
and  
**FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS**  
**for**  
**IDAHO**

*Report prepared by*

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*and*

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# WATER SUPPLY OUTLOOK for IDAHO



## GENERAL SUMMARY - JANUARY 1, 1964

Snowfall so far this winter season is far above 1963, but still significantly below average. Fall rain primed the watershed soils to a greater extent than usual. Soil moisture sites, at key snow courses throughout the state, in general indicate excellent soil moisture conditions. Also, the soils beneath the snow pack are not frozen as was the case at this time last year. This is a desirable characteristic because the soil can take up some melting snow-water in case of warm winter rains as have occurred in the past few years.

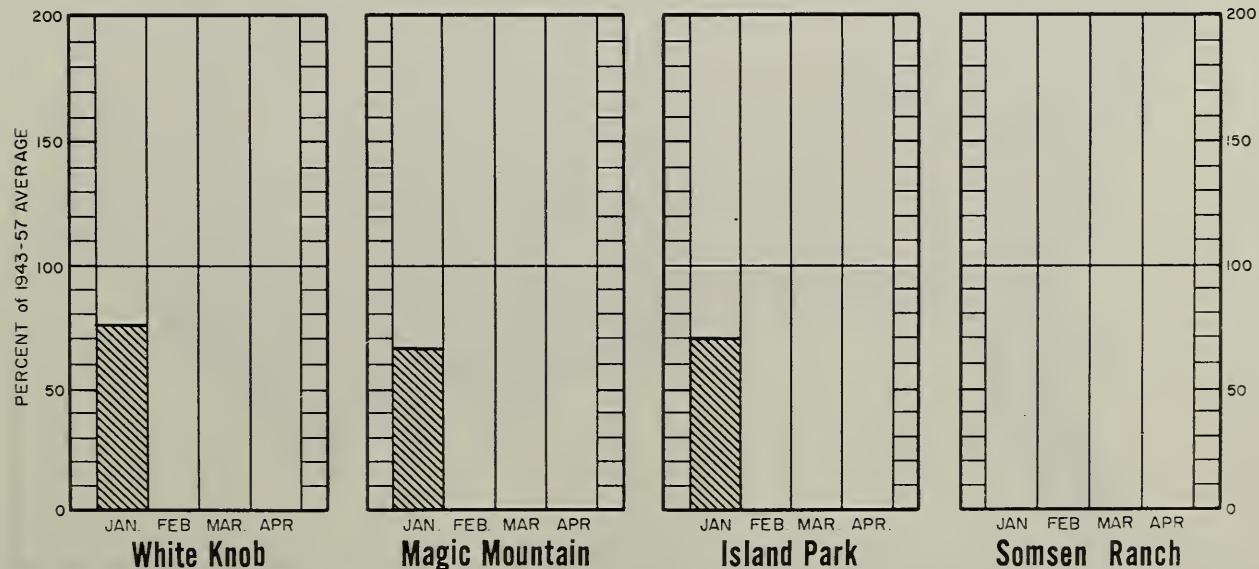
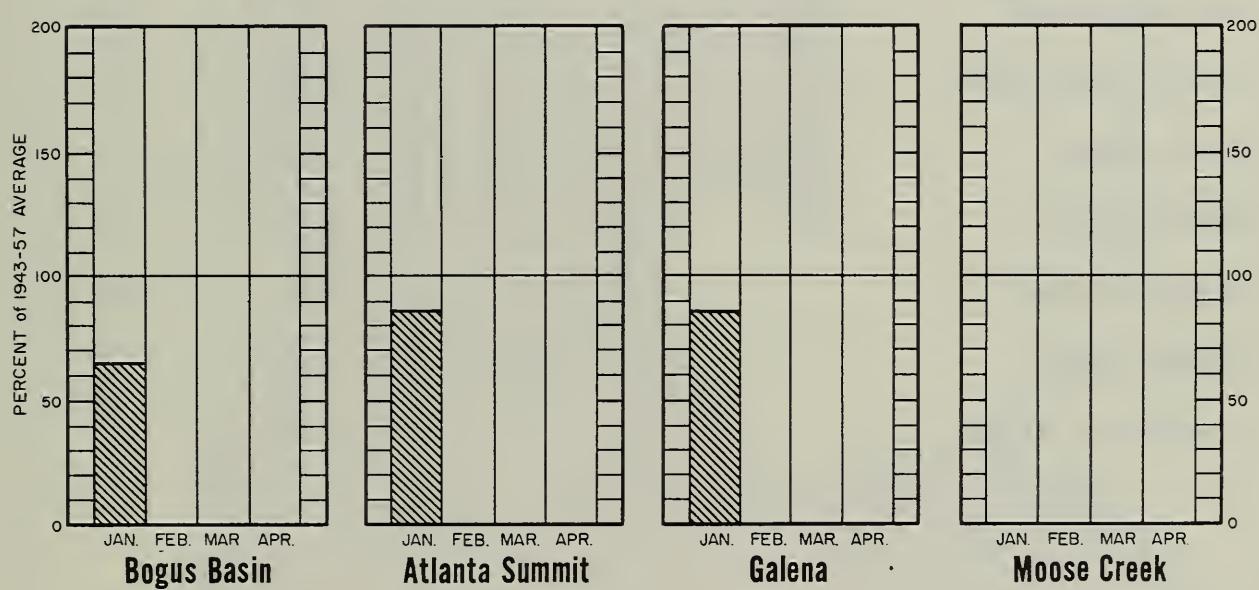
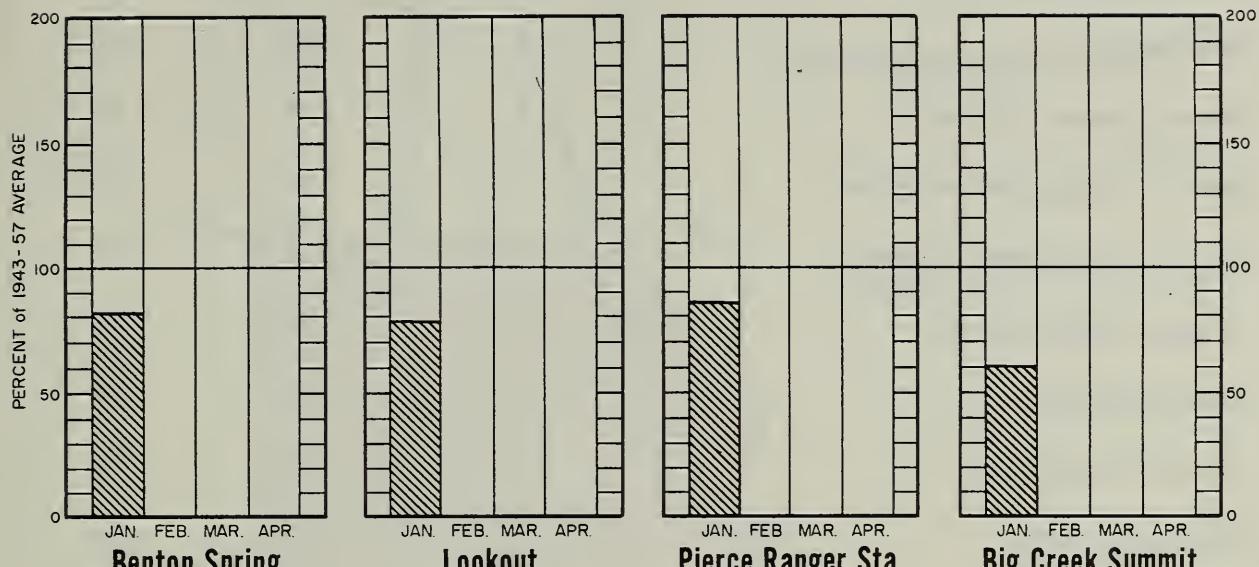
Snowfall, as measured at a very few courses on December 1, indicated near normal snow cover. However, during the month of December, there were many days when the valleys were covered by thick clouds and fog while the tops of the mountains were in bright sunshine and received no snowfall. As a result, the snow-water contents expressed as a percent of average are well below normal. On the Owyhee River, there is five times more than last year's snow cover. Reservoir storage in general is good because of the heavy rains during the summer and fall of 1963.

The water supply outlook in general appears close to normal since there is good reservoir stored water and good soil moisture conditions.



**SNOW WATER DEPTHS ACCUMULATION  
For Selected Snow Courses  
As Compared To 1943-57 15Yr. Average**

January 1, 1964



## COMPARISON of SNOW COVER

RIVER BASIN WATERSHED	NO. OF COURSES AVERAGED	THIS YEARS SNOW WATER EXPRESSED AS PERCENT OF :	
		LAST YEAR	AVERAGE <i>b</i>
Priest River	2	168	81
Spokane	1	142	78
Camas-Beaver Creek	2	121	59
Henry's Fork-Teton River	5	153	64
Raft River-Goose Creek	3	317	72
Salmon Falls Creek	6	189	67
Bruneau River	4	165	64
Little Lost River	5	258	74
Big Lost River	1	130	76
Big Wood River	5	139	78
Little Wood River	2	84	57
Boise River	5	195	74
Owyhee River	2	617	63
Payette River	5	210	60
Salmon River	2	162	76
Clearwater River	3	174	77

SNOW WATER DEPTHS  
As percent of 1943-57 15 year average

January 1, 1964

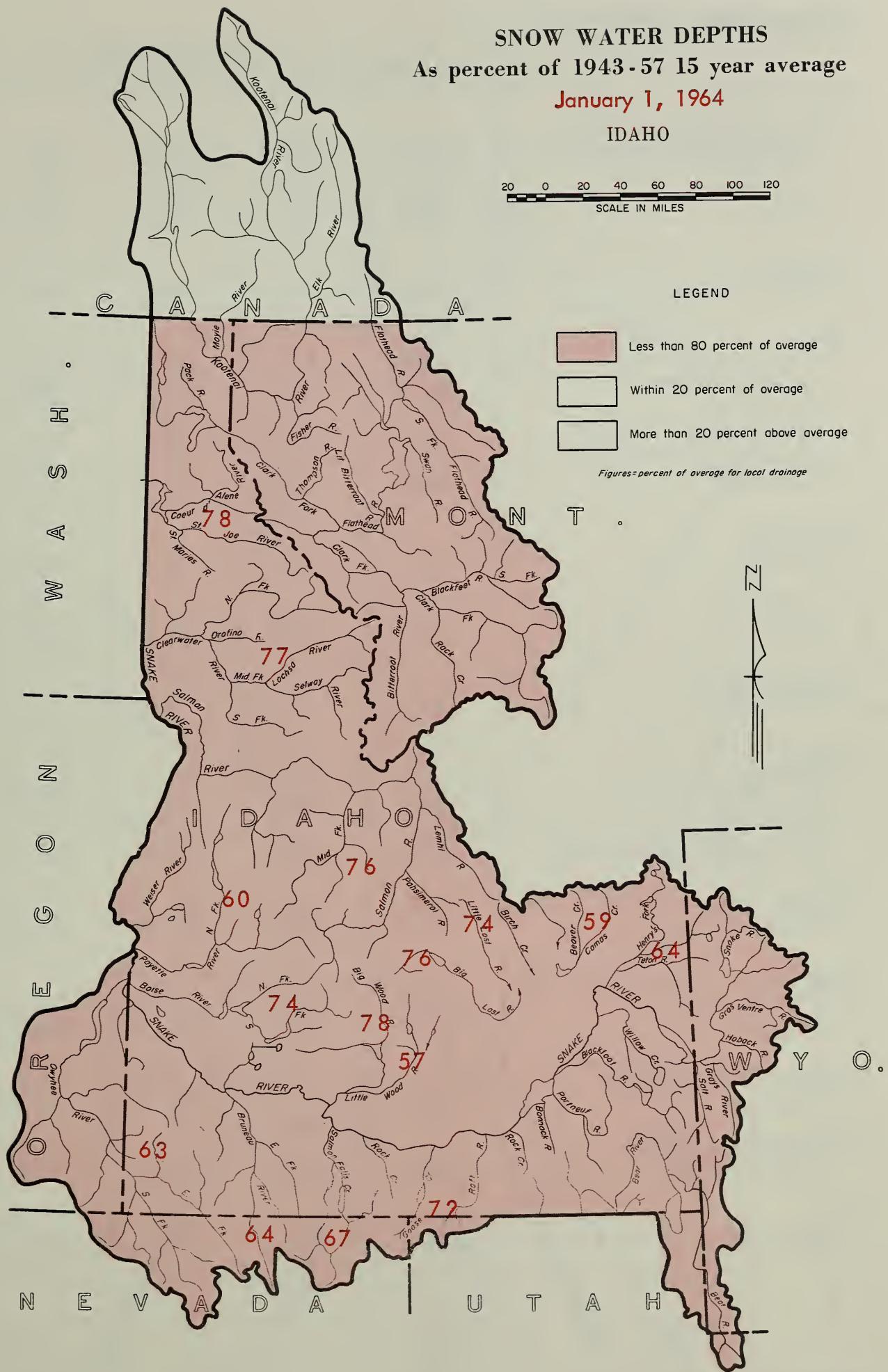
IDAHO

20 0 20 40 60 80 100 120  
SCALE IN MILES

LEGEND

- Less than 80 percent of average
- Within 20 percent of average
- More than 20 percent above average

*Figures = percent of average for local drainage*



## RESERVOIR STORAGE (1,000 Ac. Ft.)

RESERVOIR	USABLE CAPACITY	MEASURED (First of Month)		
		THIS YEAR	LAST YEAR	1943-57 AVERAGE
<u>Clark Fork-Pend Oreille</u>				
Hungry Horse	3428.0	2995.0	3155.0	2883.0
Flathead	1791.0	1532.0	1610.0	1257.1
Pend Oreille	1561.0	631.1	1152.9	534.4
Noxon	334.6	326.7	331.3	--
<u>Spokane</u>				
Coeur d'Alene	238.5	117.2	185.2	162.7
<u>Snake</u>				
Jackson Lake	847.0	607.9	531.9	435.7
American Falls	1700.0	883.7	923.2	1230.8
Palisades	1200.0	825.4	869.3	--
Island Park	127.0	64.9	95.9	89.4
Grassy Lake	15.2	7.7	11.5	12.5
Brownlee	980.2	724.0	960.0	--
<u>Big Lost</u>				
Mackay	44.2	34.4	24.0	29.3
<u>Big Wood</u>				
Magic	191.5	102.0	89.3	116.1
<u>Little Wood</u>				
Little Wood	33.3	15.6	9.5	--
<u>Boise</u>				
Anderson Ranch	423.2	306.1	301.2	237.0
Arrowrock	286.6	238.4	217.9	139.0
Lucky Peak	278.2	25.7	43.8	--
Lake Lowell (Deer Flat)	169.0	116.3	120.1	86.1
<u>Owyhee</u>				
Owyhee	715.0	266.6	202.1	377.8
<u>Payette</u>				
Cascade	653.2	345.4	532.7	211.8
Deadwood	161.9	80.0	78.3	81.3
<u>Goose-Trapper Creeks</u>				
Oakley	74.4	9.3	13.0	13.0
<u>Salmon Falls Creek</u>				
Salmon Falls	182.6	27.4	31.9	21.9
<u>Bear</u>				
Bear Lake	1421.0	700.0	717.3	806.4

## RESERVOIR STORAGE

USABLE CONTENTS (1,000 Acre Feet)

JANUARY 1, 1964

50 0 50 100 150  
SCALE IN MILES

Contents  
RESERVOIR  
Capacity

631.1  
PEND OREILLE  
1561.0

117.2  
COEUR D'ALENE  
238.5

80.0  
DEADWOOD  
161.9

345.4  
CASCADE  
653.2

724.0  
BROWNLEE  
980.2

266.6  
OWYHEE  
715.0

116.3  
LAKE LOWELL  
169.0

25.7  
LUCKY PEAK  
278.2

238.4  
ARROWROCK  
286.6

306.1  
ANDERSON RANCH  
423.2

326.7  
NOXON  
334.6

2995.0  
HUNGRY HORSE  
3428.0

1532.0  
FLATHEAD LAKE  
1791.0

34.4  
MACKAY  
44.2

.64.9-  
ISLAND PARK  
127.0

7.7  
GRASSY LAKE  
15.2

607.9  
JACKSON LAKE  
847.0

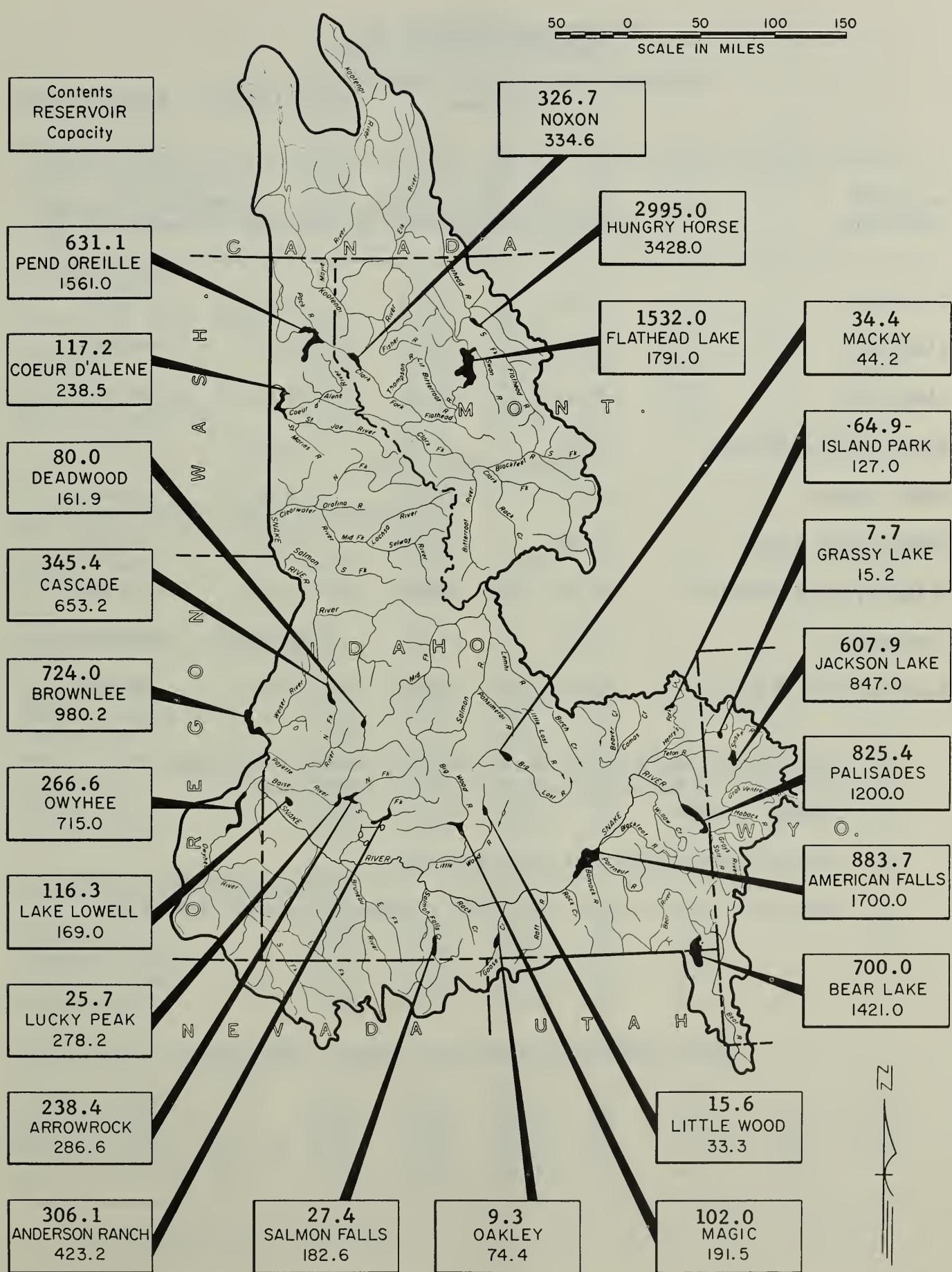
825.4  
PALISADES  
1200.0

883.7  
AMERICAN FALLS  
1700.0

700.0  
BEAR LAKE  
1421.0

15.6  
LITTLE WOOD  
33.3

102.0  
MAGIC  
191.5



VALLEY PRECIPITATION 1/

Division Averages and Departures  
In Inches

DRAINAGE DIVISIONS	Fall		Winter	
	Sep.-Oct.-Nov. 1963		December 1963	
	Average 2/	Departure 3/	Average 2/	Departure 3/
Kootenai	7.28	+1.19	2.11	-0.95
Flathead	4.34	-0.87	1.81	-0.30
Clark Fork	3.40	+0.50	0.93	-0.07
Pend Oreille-Spokane	8.05	-0.78	2.69	-1.43
Upper Snake	6.51	+1.68	1.56	-0.92
Snake River Plain	3.00	+0.90	0.81	-0.20
Salmon-Payette-Boise	5.39	+0.68	1.44	-1.32
Clearwater	5.46	-1.24	2.59	-0.48
Southeastern Oregon	3.32	+0.95	0.85	-0.47

1/ Preliminary analysis by U. S. Weather Bureau from data furnished by Meteorological Service of Canada and U. S. Weather Bureau.

2/ 15-year (1943-1957) division average.

3/ Departure from 15-year (1943-57) drainage division average.

SNOW

DRAINAGE BASIN and SNOW COURSE			CURRENT INFORMATION			PAST RECORD	
NAME	NO.	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	AVERAGE b

UPPER COLUMBIA DRAINAGEPEND OREILLE - PRIEST RIVER

Benton Meadow	16A2	2344	12/27	15	2.5	0.0	3.1
Benton Spring	16A3	4900	12/30	30	7.4	5.9	9.1
Schweitzer Ridge	16A5	6100	12/30	73	23.6	--	--
Schweitzer Bowl	16A6	4500	12/30	50	16.2	--	--

SPOKANE RIVER

Fourth of July Summit	16B3	3100	12/30	15	4.0	T	--
Granite Peak (A)	15B13	6000	12/26	49	13.7	--	--
Lookout	15B2	5250	12/30	49	12.8	9.0	16.4*
Medicine Ridge (A)	15B4	6150	12/26	59	16.5	--	--
Outlaw Creek (A)	15B12	3750	12/26	17	3.9	--	--

SNAKE RIVER BASINMEDICINE LODGE - MUD LAKE DRAINAGES

Camp Creek	12E3	6800	12/30	15	2.8	2.2	4.2*
Kilgore	11E12	6200	12/27	16	2.4	2.1	4.6*

HENRY'S FORK - TETON RIVER

Big Springs	11E9	6500	12/29	26	5.8	3.2	8.2
Darby Canyon (A)	10F21	8250	12/30	29	7.9	--	--
Island Park	11E10	6315	12/29	23	4.5	2.8	6.4
Pine Creek Pass	11F2	6750	12/30	24	4.9	1.9	--
State Line	11F1	6400	12/30	21	4.0	1.9	6.6*
Teton Pass	10F13	8500	12/30	33	9.0	5.8	16.3*
Valley View	11E8	6500	12/29	22	4.6	4.5	5.8

BLACKFOOT - PORTNEUF RIVERS

China Hat	11G2	6300	12/30	14	2.5	--	--
Dempsey Creek	12G5	6280	12/31	19	3.0	--	--
Pebble Creek	12G2	6550	12/31	14	3.6	--	--
Somsen Ranch	11G1	7000	12/30	19	3.4	--	--

RAFT RIVER, GOOSE CREEK, SALMON FALLS CREEK, BRUNEAU RIVER

Badger Gulch	14G3	6660	12/27	12	2.6	0.0	41.*
Bear Creek (A)	15H1	7800	12/30	21	4.5	2.9	7.1*
Bostetter Rgr. Sta.(A)	14G1	7500	12/30	21	4.4	1.8	7.6*
Boy Scout Camp (A)	13G2	7600	12/30	21	4.5	3.8	--

(b) 1943-57, 15 year period. # Not located directly on this drainage. \* Estimated 1943-57, 15 year Average.

(A) Aerial observation: Water content estimated.

## APPENDIX

2  
SNOW

DRAINAGE BASIN and SNOW COURSE			CURRENT INFORMATION			PAST RECORD	
			DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	LAST YEAR
NAME	NO.	ELEVATION					AVERAGE <sup>b</sup>
Cedar Creek (A)	14G5	7000	12/30	15	3.1	1.7	--
Clear Creek Mdws. (A)	13H2	9050	12/30	36	7.7	4.1	--
Deadline	14G4	6900	12/27	30	6.2	2.5	8.2*
Goat Creek (A)	15H13	8800	12/30	20	4.2	2.4	6.6*
Howell Canyon	13G1	8000	12/28	30	7.9	2.9	9.0*
Hummingbird Spgs. (A)	15H15	8945	12/30	21	4.5	2.9	7.8*
Magic Mountain	14G2	6700	12/27	25	5.2	2.1	7.8*
Pole Creek R. S.	15H14	8330	12/31	23	4.9	2.8	6.7*
Red Point (A)	15H18	7940	12/30	15	3.2	1.0	--
Summit Springs (A)	13G4	8500	12/30	11	2.4	T	--
Vi Pont (A)	13H3	7650	12/30	21	4.5	1.8	--
Wilson Creek (A)	15G2	7500	12/30	21	4.5	1.5	--
<b>LITTLE LOST RIVER</b>							
Fairview Guard Sta.	13E5	5850	12/27	14	2.0	T	2.6*
Lost-Garfield	13E3	5700	12/27	11	2.0	0.0	2.0*
Moonshine	13E6	7250	12/27	20	4.2	2.0	6.1*
Sawmill Canyon	13E4	6000	12/27	17	3.3	1.5	4.2*
Wet Creek Summit	13E7	8175	12/26	16	3.2	2.2	4.9*
<b>BIG LOST RIVER</b>							
White Knob	13F1	7700	12/30	13	2.6	2.0	3.4*
<b>BIG WOOD RIVER</b>							
Dollarhide Summit (A)	14F8	8620	12/28	35	9.0	6.9	13.0*
Galena	14F1	7500	12/31	26	6.6	5.0	7.6*
Galena Summit	14F12	8795	12/31	31	8.4	6.1	9.5*
Graham Ranch	14F5	6200	12/30	20	4.4	3.3	6.5
Mount Baldy	14F9	9000	12/28	30	7.7	4.7	9.6*
Soldier Rgr. Sta.	14F11	6100	1/4	14	2.2	3.4	--
<b>Little Wood River - Fish Creek</b>							
Garfield R. S.	13F4	6554	12/26	13	2.4	2.5	4.4*
Muldoon	13F5	6300	12/26	11	1.9	2.6	3.1*
Porcupine (A)	14F14	8350	1/3	27	6.9	9.1	--
Swede Peak (A)	13F9	7500	1/3	25	6.4	5.2	--
<b>BOISE RIVER</b>							
Atlanta Summit (A)	15F4	7500	12/28	45	11.5	6.7	13.4*
Bad Bear	15F2	5500	12/30	18	3.2	T	--
Bogus Basin Road	16F4	5360	12/31	12	2.7	0.0	1.7*
Couch Summit (A)	14F10	6950	12/28	26	6.7	4.9	--

(b) 1943-57, 15 year period. # Not located directly on this drainage. \* Estimated 1943-57, 15 year Average.

(A) Aerial observation: Water content estimated.

SNOW

DRAINAGE BASIN and SNOW COURSE			CURRENT INFORMATION			PAST RECORD	
NAME	NO.	ELEVATION	DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	AVERAGE <sup>b</sup>
Moores Creek Summit	15F1	6100	12/30	36	9.2	3.2	14.2*
Prairie	15F6	5600	12/30	16	4.5	--	--
Trinity Mountain (A)	15F5	7400	12/28	45	11.5	9.3	16.6*

OWYHEE RIVER

Silver City	16F3	6400	12/30	19	3.9	0.8	6.6*
South Mountain	16G1	6340	12/29	16	3.2	0.4	5.2*

PAYETTE RIVER

Big Creek Summit	15E2	6608	12/31	42	11.6	12.4	--
Bogus Basin	16F2	6120	12/31	28	7.0	2.3	10.7*
Cozy Cove	15E8	5900	12/27	20	4.1	2.2	7.0*
Crawford R. S.	15E3	4800	12/31	13	2.4	0.0	--
Deadwood Airstrip	15E10	5440	12/26	18	3.7	2.1	7.1*
Deadwood Dam	15E7	5500	12/27	22	4.7	2.9	7.9*
Deadwood Summit (A)	15E4	7000	12/31	59	16.3	19.4	--
Greenfield Flat (A)	16E7	7370	12/31	35	9.7	12.4	--
Rock Flat Summit	16E1	5200	12/27	24	4.9	2.1	8.0*
Squaw Meadow (A)	15D2	5800	12/31	45	12.4	12.7	--

WEISER RIVER

Boulder Creek	16D1	5500	12/26	26	7.0	5.1	--
Mica Ridge (A)	16E6	6800	12/31	37	10.2	12.4	--
Squaw Flat (A)	16E5	6230	12/31	35	9.7	12.4	--

SALMON RIVER

Big Creek Summit	15E2	6608	12/31	42	11.6	12.4	--
Borah (A)	13E8	8250	12/30	13	2.6	--	--
Chapman Creek	16D2	4215	12/30	10	1.7	0.0	1.4*
Johns Creek	16D3	3805	12/30	4	0.9	0.0	1.0*
Mill Creek Summit (A)	14E1	8870	12/30	41	10.5	6.1	--
Morgan Creek Summit	14E4	7580	12/26	20	4.3	--	--
Redfish Lake	14E2	6600	12/30	13	2.5	--	--
Twin Peaks (A)	14E3	10300	12/30	39	10.0	--	--
Whitebird Summit	16D5	4390	12/30	14	2.7	T	2.2*

Lemhi River

Above Gilmore (A)	13E19	8200	12/30	13	2.6	--	--
Aspen-Hall Pass (A)	13E21	8110	12/30	19	3.8	--	--
Copes Camp	13E17	7500	12/30	13	2.8	2.4	--
Gertson Creek (A)	13D17	8050	12/27	15	3.2	--	--

(b) 1943-57, 15 year period. # Not located directly on this drainage. \* Estimated 1943-57, 15 year Average.  
 (A) Aerial observation: Water content estimated.

## APPENDIX

4

SNOW

DRAINAGE BASIN and SNOW COURSE			CURRENT INFORMATION			PAST RECORD	
			DATE OF SURVEY	SNOW DEPTH (Inches)	WATER CONTENT (Inches)	WATER CONTENT (Inches)	LAST YEAR
NAME	NO.	ELEVATION					AVERAGE <sup>b</sup>
Hall Creek	13E20	7560	12/30	6	1.3	--	--
Meadow Lake	13E18	9100	12/30	39	10.0	9.5	--
Schwartz Lake	13E16	8500	12/30	24	5.1	3.6	--

CLEARWATER RIVER

Above Greer	16C11	1240	12/27	T	T	0.0	--
Cayuse Airstrip	15C3	3700	12/26	13	2.8	T	3.3*
Crater Meadows	15C9	6100	12/26	52	14.5	--	--
Elk Butte (A)	16C15	5550	12/26	53	15.6	--	--
Fish Lake Airstrip	15C2	5000	12/26	48	12.8	11.5	17.4*
Forty-Nine Mdws. (A)	15B3	5000	12/26	42	11.3	--	--
Goat Lake (A)	14C9	6600	12/26	51	14.2	--	--
Greer Summit	16C13	3000	12/27	T	T	0.0	--
Hemlock Butte	15C6	5500	12/26	68	20.0	--	--
Lost Lake (A)	15B14	6000	12/26	61	17.0	--	--
Midway	16C12	2200	12/27	T	T	0.0	--
Pierce Rgr. Sta.	15C5	3171	12/27	19	4.4	T	5.2*
Shanghai Summit	15C4	4600	12/26	35	9.4	--	--

PALOUSE RIVER

Crumarine Creek	16C6	3500	12/30	13	3.0	T	2.3*
East Twin	16C3	4000	12/30	17	4.7	T	5.1*
Howard Creek	16C5	3500	12/30	12	2.3	T	2.1*
Moscow Mountain	16C2	4800	12/30	24	6.1	1.0	7.1*
West Twin	16C4	4200	12/30	14	3.0	T	4.0*

GREAT BASIN DRAINAGEBEAR RIVER

Emigrant Summit	11G6	7350	12/30	26	6.6	--	--
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Montpelier Creek

Giveout	11G16	6840	12/30	19	4.4	1.4	--
Little Beaver	11G20	6970	12/30	24	5.2	1.8	--
Montpelier Creek	11G18	6570	12/30	13	2.5	1.0	--
Whiskey Flat	11G21	6985	12/30	15	4.0	0.7	--

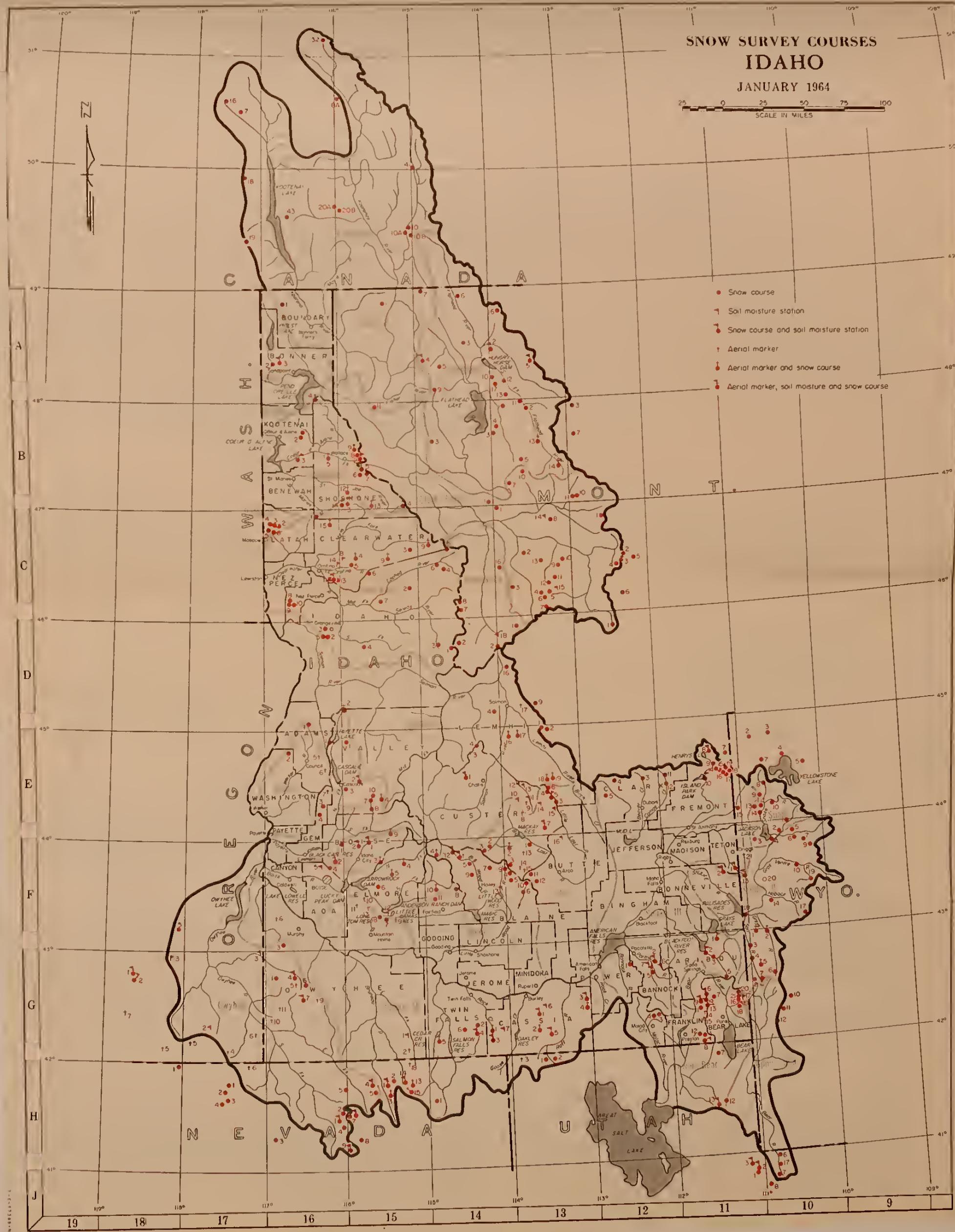
(b) 1943-57, 15 year period. \* Not located directly on this drainage. • Estimated 1943-57, 15 year Average.

(A) Aerial observation: Water content estimated.

## SNOW SURVEY COURSES

## IDAHO

JANUARY 1964

25 0 25 50 75 100  
SCALE IN MILES

# Index to IDAHO SNOW COURSES

NO.	STATE	NAME	SEC.				SEC.				SEC.				SEC.				SEC.											
			TOP. LAT.	TOP. LONG.	AGE. ELEV.	ELEV.	TOP. LAT.	TOP. LONG.	AGE. ELEV.	ELEV.	TOP. LAT.	TOP. LONG.	AGE. ELEV.	ELEV.	TOP. LAT.	TOP. LONG.	AGE. ELEV.	ELEV.	TOP. LAT.	TOP. LONG.	AGE. ELEV.	ELEV.								
<b>KOOTENAI RIVER</b>																														
15811	I	Baree Creek	36	26N	35W	5500	1002A	WY	Blind Bull	6	34N	115W	8750	1382A	I	Sawmill Canyon	17	12N	26E	6100	1682A	I	Hicks Ridge	15	15N	22	6800			
15812	I	Brush Creek	33	30N	26E	5200	1003A	WY	Bryan Flat	9	38N	115W	6250	1383A	I	Sawyer Flat	18	18N	22	6200	1683A	I	Squaw Flat	15	16N	21	6000			
16	I	Ferguson	51°10'	117°53'	2994	1003	I	Canyon	10	24°44'	110°30'	7750	1384A	I	Shaver Creek	15	8N	26E	8175	1684A	I	Flaser Creek	15	6N	16	7100				
10	I	Fernie	49°31'	114°01'	3500	1007	I	CCF Camp	9	29N	118W	7200	1385A	I	Bear Canyon	20	5N	18	7600	1685A	I	Above Gilmore	13	13N	26	8200				
7	I	Gerrard	50°33'	114°07'	6000	1008A	WY	Cimwood Lake	15	31N	118W	7100	1386A	I	Cherry Creek Pass	1	5N	23E	8400	1686A	I	Big Flat	25	11N	22	7500				
43	I	Gray Creek	49°37'	116°41'	510	1009	I	Custer Creek	2	32N	116W	6534	1387A	I	Copper Basin	24	6N	21E	8000	1687A	I	Borah	21	10N	22	8250				
208	I	Kimberley	49°41'	114°01'	300	1010	I	Dundan Ranch	1	14N	WT	East Rim Divide	32	37N	114W	7500	1388A	I	Iron Bog	23	4N	20E	7650	1688A	I	Chapman Creek	16	29N	22	7235
32	I	Martle Canyon	51°12'	114°07'	57	1011	I	WT	Four Mile Meadows	35	45N	112W	7770	1389A	I	Ledollet	34	4N	21E	8700	1689A	I	Loes Camp	36	18N	22	7500			
108	I	Morrison Ridge	49°30'	115°21'	61	1012	I	WT	Four Mile Meadows	1	5N	118W	7200	1390A	I	Lost Wood Divide	19	7N	18E	8700	1690A	I	Arison Creek	22	23N	22	8150			
19	I	Neon Fernie	47°50'	115°22'	24	1013	I	WT	Four Mile Meadows	1	18N	WT	North Park Meadow	20	7N	18E	8150	1691A	I	North Park Meadow	11	23	16	8100						
104	I	Red Mountain	4	26N	29W	66	1014	I	WT	Four Mile Meadows	10	19N	WT	Gros Ventre Summit	30	40N	113W	8750	1692A	I	Big Flat	1	10N	22	8050					
18	I	Saxton	49°59'	114°01'	75	1015	I	WT	Four Mile Meadows	21	33N	118W	7500	1393A	I	Glacier Mill	9	6N	18E	7500	1693A	I	Borah	9	10N	21	7450			
81	I	Sinclair Pass	53°12'	115°01'	45	1016A	I	WT	Four Mile Meadows	1	45N	115W	7300	1394A	I	Twin River	22	4N	22E	1	13P1	I	Lower Big Mlet	31	12N	21E	6600			
1621	I	Smith Creek	29	62N	70	4000	1017	I	WT	Four Mile Meadows	1	45N	115W	7300	1395A	I	White Lamb	23	2N	23E	1	13P2	I	Mahogany Bar	1	18N	23	7900		
204	I	Sullivan Mine	47°43'	114°01'	51	1018	I	WT	Levi Lake Divide	44°43'	116°47'	1000	1019A	I	WT	Levi Lake Divide	1	5N	118W	7200	1696A	I	Meadow Lake	24	13N	26E	7100			
41	I	Upper Elk River	50°37'	114°01'	22	1020	I	WT	Levi Lake Divide	1	17N	WT	Levi Lake Divide	8	6N	118W	7200	1697A	I	Mill Creek Summit	3	13N	17	3800						
1447	I	Weasel Divide	6	37N	24W	5450	1021	I	WT	Levi Lake Divide	8	17N	WT	Levi Lake Divide	1	6N	118W	7200	1698A	I	Mountain Lake	22	4N	26	7700					
<b>PRIEST RIVER</b>																														
1642C	I	Penton Meadow	27	55N	48	4000	1022	I	WT	Moran Bay	14	45N	116W	6500	1399A	I	Salena	3	6N	15E	3000	1699A	I	Morgan Creek	32	10N	19E	7580		
1643M	I	Porter Spring	3	56N	74	4000	1023	I	WT	Mosby Basin	45°42'	115W	7500	1400A	I	Salena Summit	30	7N	15E	8715	1699A	I	Morgan Creek	32	10N	19E	7580			
<b>PEND OREILLE - CLARK FORK RIVER</b>																														
13013	M	Black Pipe	23	51	150	71	1024	I	WT	Mosby Basin	3	30N	116W	6500	1401A	I	Salena	1	11N	15E	3000	1699A	I	Salena Creek	22	4N	26	7700		
1205	M	Cheeseman Reservoir	7	53	52	4000	1025	I	WT	Mosby Basin	45°42'	115W	7500	1402A	I	Salena	3	6N	15E	3000	1699A	I	Morgan Creek	32	10N	19E	7580			
12010	M	Copper Creek	1	55	52	4000	1026	I	WT	Mosby Basin	45°42'	115W	7500	1403A	I	Salena	3	6N	15E	3000	1699A	I	Morgan Creek	32	10N	19E	7580			
12011	M	Cotter Mine	2	55	52	4000	1027	I	WT	Mosby Basin	45°42'	115W	7500	1404A	I	Salena	3	6N	15E	3000	1699A	I	Morgan Creek	32	10N	19E	7580			
13010	M	Coyote Hill	12	55	160	4000	1028	I	WT	Mosby Basin	45°42'	115W	7500	1405A	I	Salena	3	6N	15E	3000	1699A	I	Morgan Creek	32	10N	19E	7580			
1309	M	El Dorado Mine	23	55	150	4000	1029	I	WT	Mosby Basin	45°42'	115W	7500	1406A	I	Salena	3	6N	15E	3000	1699A	I	Morgan Creek	32	10N	19E	7580			
13011	M	Fred Pass	17	56	150	4000	1030	I	WT	Mosby Basin	45°42'	115W	7500	1407A	I	Salena	3	6N	15E	3000	1699A	I	Morgan Creek	32	10N	19E	7580			
13015B	M	Georgetown Lake	4	56	52	4000	1031	I	WT	Mosby Basin	45°42'	115W	7500	1408A	I	Salena	3	6N	15E	3000	1699A	I	Morgan Creek	32	10N	19E	7580			
13010	M	Gold Creek	14	56	150	4000	1032	I	WT	Mosby Basin	45°42'	115W	7500	1409A	I	Salena	3	6N	15E	3000	1699A	I	Morgan Creek	32	10N	19E	7580			
13011	M	Intergard	6	56	150	4000	1033	I	WT	Mosby Basin	45°42'	115W	7500	1410A	I	Salena	3	6N	15E	3000	1699A	I	Morgan Creek	32	10N	19E	7580			
13012	M	Lubrecht Forest	17	56	150	4000	1034	I	WT	Mosby Basin	45°42'	115W	7500	1411A	I	Salena	3	6N	15E	3000	1699A	I	Morgan Creek	32	10N	19E	7580			
13013	M	North Fork Jocko	3	56	150	4000	1035	I	WT	Mosby Basin	45°42'	115W	7500	1412A	I	Salena	3	6N	15E	3000	1699A	I	Morgan Creek	32	10N	19E	7580			
13014	M	Pipeside Pass	10	56	150	4000	1036	I	WT	Mosby Basin	45°42'	115W	7500	1413A	I	Salena	3	6N	15E	3000	1699A	I	Morgan Creek	32	10N	19E	7580			
13012	M	Red Lion	20	65	150	4000	1037	I	WT	Mosby Basin	45°42'	115W	7500	1414A	I	Salena	3	6N	15E	3000	1699A	I	Morgan Creek	32	10N	19E	7580			
13013	M	Slide Rock Mountain	35	108	160	4000	1038	I	WT	Mosby Basin	45°42'	115W	7500	1415A	I	Salena	3	6N	15E	3000	1699A	I	Morgan Creek	32	10N	19E	7580			
13015	M	Southern Cross	9	56	150	4000	1039	I	WT	Mosby Basin	45°42'	115W	7500	1416A	I	Salena	3	6N	15											

## Agencies Assisting with Snow Surveys , etc.

### GOVERNMENT AGENCIES

#### Canada:

Department of Lands, Forests, and  
Water Resources, British Columbia  
Department of Resources and Development,  
Water Resources Division

#### States:

Idaho State Reclamation Engineer  
State of Idaho Department of Fish and Game  
University of Idaho  
Idaho State University  
Montana Agricultural Experiment Station  
Montana State Water Conservation Board  
Nevada Cooperative Snow Surveys  
Oregon Agricultural Experiment Station  
Oregon State Engineer and Corps of  
State Watermasters  
Utah Cooperative Snow Surveys  
Wyoming Cooperative Snow Surveys

#### Federal:

U. S. Army Engineers

U. S. Department of Agriculture  
Forest Service  
Agricultural Research Service

U. S. Department of Commerce  
Weather Bureau

U. S. Department of the Interior  
Bonneville Power Administration  
Bureau of Reclamation  
Fish and Wildlife Service  
Geological Survey  
Indian Service  
National Park Service  
Bureau of Land Management

### PUBLIC UTILITIES

The Montana Power Company  
Washington Water Power Company  
Idaho Power Company  
Utah Power and Light Company

### ORGANIZED PUBLIC AGENCIES

Big Lost River Irrigation District  
Boise Project Board of Control  
Little Wood River Irrigation District  
Jordan Valley Irrigation District  
Salmon Falls Creek Irrigation Company  
Twin Falls Soil Conservation District  
Twin Lakes Irrigation Company  
Big Wood Irrigation Company  
Owyhee Project - North & South Board of Control

### PRIVATE CORPORATIONS

Amalgamated Sugar Company

*Other organizations and individuals furnish valuable information for  
snow survey reports. Their cooperation is gratefully acknowledged.*

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water supply for irrigation,  
domestic and municipal water  
supply, hydro-electric power  
generation, navigation,  
mining and industry

—  
*"The Conservation of Water begins  
with the Snow Survey"*